Virginia Employment Commission

The FORUM

Virginia's Labor Market & Occupational Information Newsletter

Volume 9, Number 1 Spring/Summer 2009

This Issue's Focus: Professions in the Health Care Field

PLUS: 9 Recession-Proof Careers & Why They are Secure

Welcome to the spring/summer issue of *The Forum* newsletter.

Every day you hear in the news about the effects of the recession on the country as a whole as well as on our state of Virginia. One of these effects is the rising unemployment rate. When businesses fear a bad economy, they tend to start cutting back and laying off employees. In this issue, we are going to look at jobs that are still doing well even during the recession—in particular, the health care field. Our *Focus* article this issue will look in detail at nursing, lab technician, and pharmacy careers.

In This Issue:

The Forum is a newsletter produced and distributed three times a year by the Virginia Employment Commission. It can be accessed at www.VaWorkConnect.com under Labor Market Information/Publications.

Editor: David Tysinger

Assistant Editor: Joan McDorman

Graphic Artist: Linda Simmons

It's Been 10 Years since My Last Job Search...*What do I do?*

Rachel Zupek, writer
CareerBuilder.com

It's been 26 years since Rick Hingst, 54, has looked for work. Kama Linden, 39, hasn't job hunted for 10 years. And Diana Macfee, 40, has been out of the work force for 12 years.

Now they are joining the millions of people looking for work after a several-year hiatus.

For such reasons as getting laid off, working after retirement or returning to work after a period of stay-at-home parenting, those who have been absent from the job search for a long time are finding themselves running into a problem: The process has changed.

"Many people who are jumping back into the job market, especially after they have taken a hiatus, need to get clarity on their core value propositions, who they are as leaders and how they can best convey this through their résumés and in a job interview," says Greg Selker, president and CEO of Selker Leadership, an executive search and leadership consulting company.

Easier said than done.

Times, they are a-changin'

Let's be honest—job searching is not what it was 10, 15 or even two years ago. Despite what's going on in the economy, job seekers are bombarded with changes in technology, social networking sites, virtual career fairs, advice blogs and more.

The Internet has indeed added a whole new dimension to the job search for Hingst, who accepted an early retirement offer in November 2008 after 24 years of service. But, he says he doesn't know if it's necessarily better.

"It is a handy tool for doing research on companies, careers and seeing what jobs are available out there, but it can also eat up a lot of your time and yield no results," he says.

He says he likes that the Internet allows him to reconnect and network with people on social networking sites such as LinkedIn.

Macfee, who's returning to work after staying home to raise her daughter for the past 11 years, agrees that online networking has made her job search more productive and—gasp!—more enjoyable.

"Today, job seekers have an amazing support tool [through] online networks. [They] can research or [ask questions about] a company through various social media tools and determine if the company is a right fit before submitting a résumé or engaging in a string of interviews," Macfee says. "Job seekers, recruiters and industry professionals can easily connect through social media and offer resources to one another, leads and tips."

Ultimate challenge

Though changes in the job search over the years have given workers some advantages, they have also posed several challenges.

After learning that the fitness company she works for is cutting the classes she instructs, Linden has applied for numerous jobs in her field. Her search has come up short, as she's found that all the relevant jobs require more schooling and loans that she just doesn't want to take out.

Hingst finds that getting through to actual people in the company is the biggest challenge he's facing. Additionally, he says it's maddening not hearing anything back from employers as to why he wasn't hired.

"It is frustrating when you apply for a position and you receive no feedback as to why you were rejected," he says. "Was I overqualified ... or did they just not like the font style on my résumé?"

Markell Steele, career counselor with Futures in Motion, says that a common problem she sees among out-of-practice job seekers is their lack of focus and the tendency to keep their options wide open.

"They don't want to limit themselves and think that by being open to anything they will catch the most opportunities. They also think this will show them to be open-minded and flexible," she says. "Rather than demonstrating their expertise and breadth of knowledge, they demonstrate that they know a lot about a little."

Eric Barron, president of Eric Barron Live, says a pattern he's seen among rusty job seekers is how poorly they are able to clearly articulate how the new company will benefit by hiring them.

"They need to pay less attention to the details on their résumés and focus more on making a connection with the person doing the hiring," he says, adding that the hiring manager "must be able to get to know you and the personality strengths you bring to the position."

"Remember, human beings are still doing the hiring, where emotions can play a major role. Those that take the time to bring their qualifications and personality to life will have a clear advantage."

If your job seeking skills are a little out of practice, follow these tips from the experts to find your footing in your next search:

1. Get focused

It's a new world out there and you need to get organized. Start by conducting a personal career inventory, Steele suggests. Analyze your abilities and pay attention to transferable skills, current interests, personality traits and key accomplishments.

When his job search yielded no results, Hingst took stock of everything he's done throughout his career, his accomplishments and abilities. He put together a PowerPoint presentation to help develop his résumé and ended up with another way to sell himself by posting the presentation online.

2. Get organized

Information overload calls for you to get organized. You need to stay focused and pursue what works, says Steve Davies, president of PerfectJob Software. He suggests recording your job search: For each saved piece of information, record what job, person, company or task it is for and why it's important. Additionally, you should track what works, checking which résumés, job sources and referrals result in interviews. Finally, set time limits, he says. Social sites are great for research but can absorb the day.

3. Be flexible

Be open to new opportunities, even if the job title, salary and benefits may not be exactly what you hoped for, says Max Messmer, chairman and CEO of Robert Half International and author of "Job Hunting for Dummies, 2nd Edition." "Once you get your foot in the door, you will have a chance to prove yourself."

4. Work with a professional

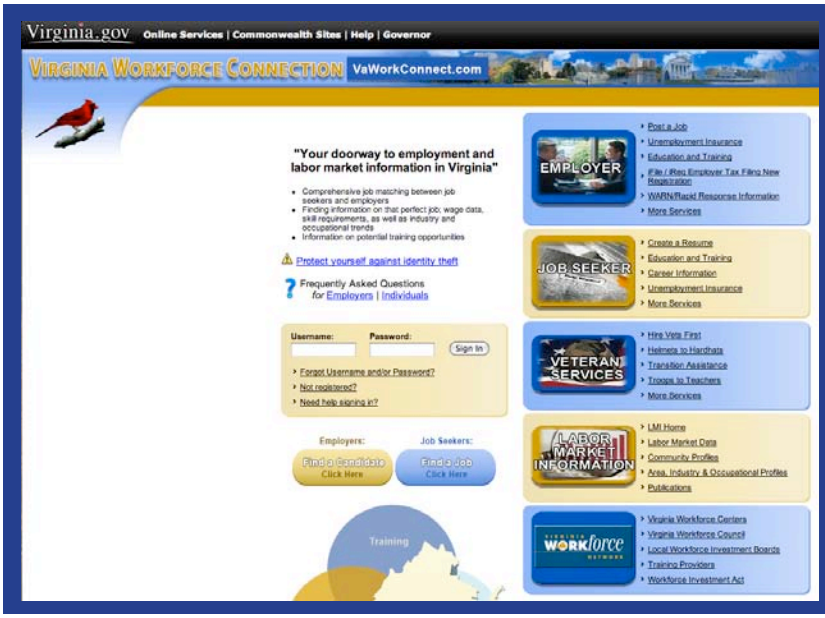
"Staffing professionals can be your eyes and ears in the job market," Messmer says. "Recruiters also provide useful feedback on your résumé and interview skills, and help you locate full time and temporary jobs."

5. Get connected

The Internet has changed the job search and created many opportunities for job seekers to showcase their expertise, Steele says. Employers also have easier access to qualified candidates.

"Increasingly, recruiters are using tools such as Twitter, Facebook and LinkedIn to identify candidates. If you're serious about your job search, you need to set up complete, professional profiles and get connected to opportunities."

Source: Rachel Zupek is a writer and blogger for CareerBuilder.com. She researches and writes about job search strategy, career management, hiring trends and workplace issues.



www.VaWorkConnect.com

Your source for all things employment-related:

job listings, résumé builder, training resources, career services, as well as reports and data about employment levels, unemployment rates, wages and earnings, and employment projections.

9 Recession-Proof Careers & Why They are Secure

Written by Cathie Gandel and Hilary Sterne; additional reporting by Neena Samuel and Kathryn M. Tyranski

Despite the economic downturn, these careers are still growing.

These industries project promise—and jobs—for the future, according to the Bureau of Labor Statistics and the Occupational Information Network database.

1. Education

Math and science teachers will be in demand as the U.S. struggles to compete with other countries in engineering, technology, and medicine. A growing immigrant population means more English-as-a-second-language classes will be needed.

- **Postsecondary teachers**
  Median salary: $56,120
  Education: bachelor's degree and often a master's or doctorate degree
- **Teacher assistants**
  Median salary: $21,580
  Education: some post-secondary education or vocational training
- **Educational, vocational, and school counselors**
  Median salary: $49,450
  Education: secondary education, associate's, bachelor's, or master's degrees

2. Energy

Some of the jobs in this field are the result of projects started a year or more ago. But the real boost will come from the new administration's commitment to a more efficient national energy system. "Growth of energy consumption around the world will keep this sector strong," says Laurence Shatkin, coauthor of 150 Best Recession-Proof Jobs.

- **Power plant operators**
  Median salary: $56,640
  Education: vocational training and several years of on-the-job training
- **Insulation workers**
  Median salary: $31,280
  Education: secondary education and vocational training
- **Electrical power-line installers and repairers**
  Median salary: $52,570
  Education: vocational training and several years of on-the-job training

3. Environment

Green is getting the green light in a nationwide push to make homes and office buildings more energy-efficient and to develop alternative energy sources (solar, wind, nuclear) as well as fuel cell technology. "Anything involved with wind power, either the design or related products, will be big," says Laurence Stybel.

- **Environmental scientists**
  Median salary: $58,380
  Education: master's degree
- **Environmental engineers**
  Median salary: $72,350
  Education: bachelor's
- **Hydrologists**
  Median salary: $68,140
  Education: master's degree

4. Financial Services

Rising from the ashes of a very bad year, financial services have a bright future. Corporate America's wretched excesses mean more government regulation. Workers who are retiring will need advice on how to make their money last. Small businesses may outsource accounting services. As we get to

the middle of the recession, there will be a wave of mergers and acquisitions, Stybel predicts. "People with experience in managing the process—corporate attorneys, investment bankers, and accountants—will be in demand."

- **Financial advisers**
  Median salary: $67,660
  Education: bachelor's degree
- **Accountants and auditors**
  Median salary: $57,060
  Education: bachelor's degree
- **Sales agents (securities and commodities)**
  Median salary: $68,430
  Education: bachelor's degree

5. Government

More than half a million federal employees will retire by 2016, leaving open positions at agencies from the CIA to AmeriCorps to NASA. There will also be opportunities at the state and local levels. "In addition to police work and homeland security, government inspects and regulates many industries," says Shatkin. "Workers can sometimes capitalize on their experience in an industry by moving into a regulatory job."

- **Government property inspectors**
  Median salary: $48,400
  Education: vocational training, associate's or bachelor's degree
- **Immigration and customs inspectors**
  Median salary: $59,930
  Education: bachelor's degree
- **Urban and regional planners**
  Median salary: $57,970
  Education: master's degree

6. Health Care

Health care pops up at the top of just about every list of hot careers. All of us are getting older and living longer, sometimes with chronic health conditions. What's more, health insurance practices may undergo a radical revision during the Obama administration, which has announced plans to address three central issues: coverage, cost, and quality of care. "Health care is a growing industry," says Bettina Seidman, "and not just for health care professionals. There will also be jobs for secretaries, accountants, and administrators."

- **Registered nurses**
  Median salary: $60,010
  Education: associate's or bachelor's degree
- **Dental assistants**
  Median salary: $31,550
  Education: secondary education, plus a few months to one year of on-the-job training
- **Medical records and health information technicians**
  Median salary: $29,290
  Education: associate's degree

7. International Business

Corporations, consulting firms, nonprofits, and even governments are going after global markets. People with international expertise, foreign-language skills, or a willingness to move abroad will be in demand. "The global economy is only going to grow," says John Challenger. "U.S. involvement will expand, short and long term."

- **Interpreters and translators**
  Median salary: $37,490
  Education: bachelor's degree
- **International management analysts**
  Median salary: $71,150
  Education: bachelor's or master's degrees
- **Market research analysts**
  Median salary: $60,300
  Education: bachelor's or master's degrees

8. Law Enforcement

International terrorism makes daily headlines, and fear of financial insecurity is matched only by concern for our physical safety. "Crime doesn't go down in a recession," says Shatkin. "It may even increase."

- **Probation officers**
  Median salary: $44,510
  Education: bachelor's degree
- **Court reporters**
  Median salary: $45,330
  Education: postsecondary vocational training
- **Paralegals**
  Median salary: $44,990
  Education: associate's degree in paralegal studies

9. Technology

New uses of technology in services and products like electronic health records mean that this sector will continue to be strong. "We have just begun to use the Internet as an entertainment medium in publishing, music, and film," says Peter Weddle.

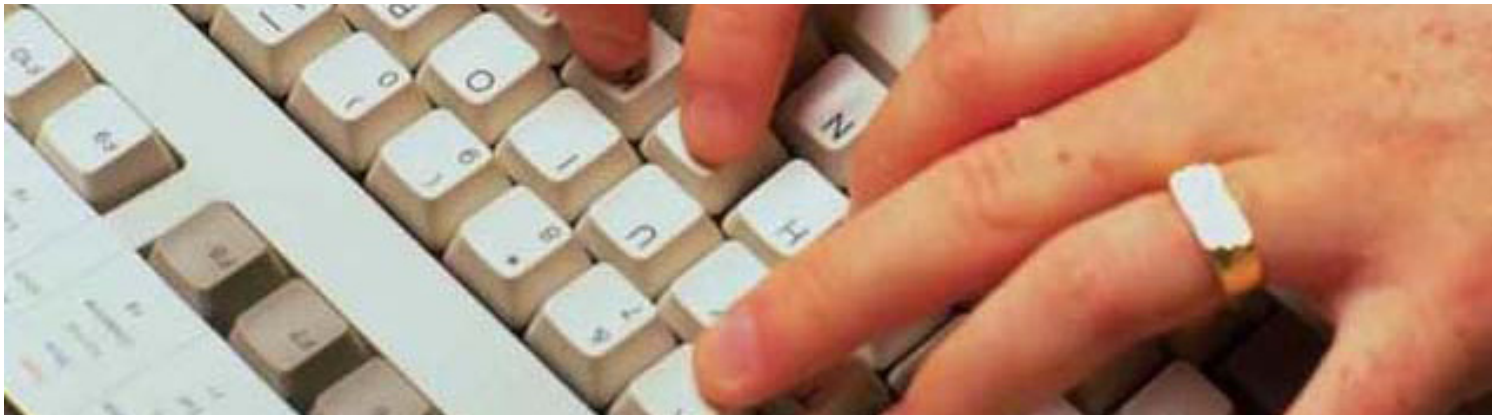
- **Computer systems analysts**
  Median salary: $73,090
  Education: bachelor's
- **Network systems and data communications analysts**
  Median salary: $64,600
  Education: bachelor's degree
- **Computer, ATM, and office machine repairers**
  Median salary: $37,100
  Education: high school or vocational training

And We'll Always Be Looking For…

"Think of basic human needs, the things we can't do without," says Shatkin. They provide what he calls "little islands" of employment in this economy. For example, he says, we will always need sewage and water treatment. Challenger says the food industry is a core area: "People have to eat, and the global population is increasing."

In a down economy, people don't buy new cars—they repair their old ones. People turn to their clergy for comfort. Funeral directors will always have jobs. And since pets are very much a part of the family, veterinarians and veterinary technicians will continue to be in demand.

Source: www.rd.com



FOCUS

No matter what the economy is doing, people will still get sick and need medical care. For this reason, the health care field is among one of the most recession-proof industries. In this issue, we are focusing on three specific jobs within the health care field: nursing, lab technician, and pharmacist.

Nursing Careers

Nursing is a career filled with endless personal and professional rewards. If you choose nursing, you are choosing to spend your life helping others, using skills that blend scientific knowledge with compassion and caring. There are few professions that offer such a rewarding combination of high tech and high touch.

Nursing is the nation's largest health care profession, with 2.6 million registered nurses (RNs), and many more needed in the future. Nurses are the largest single component of any hospital staff—the primary providers of hospital patient care—and, they deliver most of the nation's nursing home care. They work in a variety of other settings as well. (See nursing opportunities.)

With the aging population growing steadily, there will be no shortage of jobs for nurses well into the future. In most parts of the country, the average age of nurses is growing, meaning that more nurses are retiring, thus furthering the nursing shortage. So, as the current crop of Baby Boomer-age nurses nears retirement, fewer trained nurses are in the pipeline to replace them. This translates into more job opportunities with the potential of higher starting salaries.

What do nurses do?

Nursing is a blend of science and technology with the art of caring and compassion. Every day on the job nurses use the science they learned in nursing school. And, when employed, they take continuing education courses on a regular basis to keep up with the latest in the medical and nursing sciences. Nurses work closely with doctors and other health care professionals, and serve as the advocates for patients and families.

Ongoing advances in technology—which are helping people live longer, healthier lives—have made nursing even more rewarding to those who like developing their skills in this area. Nurses do:

- Assessments: Nurses gather information about the patient's physical condition, emotional state, lifestyle, family, hopes, fears, etc.
- Diagnoses: Nurses identify the patient's problems or needs, which often are emotional or spiritual, as well as physical.
- Planning: Nurses find ways to address these problems and set specific goals for improvement. Whenever possible, nurses encourage patients to participate in planning their care.

- Implementation: The nursing plan is put into effect. For example, nurses may administer medications and treatments, or teach patients how to care for themselves; e.g, showing them how exercise might improve their flexibility after surgery.
- Evaluation: Nurses regularly review the results of the plan and make adjustments when necessary.

Nurses care for patients in the following ways:

- Nurses help bring babies into the world, and they take care of new moms before and after childbirth.
- Nurses help sick and injured people get better, and they help healthy people stay healthy.
- Nurses perform physical examinations.
- Nurses give medications and treatments ordered by doctors.
- Nurses are concerned with the emotional, social, and spiritual conditions of their patients.
- Nurses teach and counsel patients, as well as family members, and explain what they can expect during the recovery process.

- Nurses provide health care teaching and counseling in the community.
- Nurses observe, assess, evaluate, and record patients' conditions and progress, and they communicate patient condition information to doctors and other members of the health care team.
- Nurses help patients and families determine the best mix of health and social services—hospice, home care, rehabilitation, physical therapy, and others.
- Nurses design and complete quality assurance activities to ensure appropriate nursing care.
- Nurses help terminally ill patients die with dignity, and they help family members deal with dying and death.

The job market

Today, there is a significant nursing shortage, and statistics show that the need for nurses in years to come will only become greater. Here is why:

- Because advances in health care are helping people live longer, there are more elderly people who need care.
- The number of people who are sicker and in need of more skilled nurses is growing.
- More nurses are needed outside of the hospital setting.
- The current nursing workforce is aging. As more nurses retire (many are expected to retire over the next 10-15 years), more will be needed to replace them.

So, nurses today—particularly those with a bachelor of science degree in nursing (BSN)—are almost guaranteed jobs right out of college and can be assured of a secure career well into the future.

Income potential

The typical starting salary for entry-level RNs is $44,600, says Joe Kilmartin, director of compensation

for Salary.com. Compare this to average starting salaries for new graduates in:

Accounting - $43,269
Marketing - $33,873
Economics - $24,667
Teaching - $31,704

According to the Bureau of Labor Statistics, median annual earnings of registered nurses were $52,330 in 2004. The middle 50 percent earned between $43,370 and $63,360. The lowest 10 percent earned less than $37,200, and the highest 10 percent earned more than $74,760.

Salaries increase as nurses gain experience. When you consider the pay a nurse receives for working shifts and overtime, many nurses make much more than their base salaries. Nurses who go into management and advanced clinical practice can earn even more.

- Clinical Nurse Specialists make about $41,226.
- Nurse administrators average $45,071.
- Nurse anesthetists earn about $113,000.
- Nurse practitioners average $71,000.

Nursing opportunities

Nurses today have more options than ever before about what kind of work they do, where they do it, and when they work. About 55 percent of nurses work in hospitals. The rest work in many other settings, including:

- Long-term-care centers (rehabilitation, nursing homes, hospice)
- Community health clinics
- Freestanding outpatient and surgery centers
- Medical offices (eye doctors, dentists, obstetricians, surgeons, and others)
- Home care (visiting nurses, private duty nurses)
- Nursing schools (as professors)
- Corporate health centers (occupational safety, consultants, educators)
- Insurance and managed care companies
- Other companies (pharmaceutical, medical technology, biotech, and others)
- Research centers (research nursing)
- Schools (including K-12, university clinics)
- Military
- Peace Corps and international service organizations
- Hospital regulators (conducting surveys, inspections)

Nursing opportunities in hospitals

Where do nurses work in hospitals? Practically everywhere! They work in:

- Patient care units at the bedside
- Operating rooms, trauma centers, and emergency rooms
- Medical records or other hospital offices
- X-ray and other diagnostic units
- Intensive care units
- Surgical and recovery units
- Same-day surgery centers
- Pediatrics, caring for children

- Hospital nurseries or neonatal intensive care units, caring for newborns
- Obstetrics, helping new moms give birth
- Psychiatric and drug treatment centers
- Laboratories
- Helicopters and ambulances, caring for patients in transport to hospitals
- And in many other places!

Working hours

Nurses have lots of flexibility in their working schedules.

- Nurses can work days, evenings, or nights.
- A nurse's shift can be 8-12 hours.
- Some nurses work 36 hours in 3 days or 40 hours in 4 days (then have 3-4 days off).
- Some work part-time or only on weekends.

Generally, though, nurses work 40 hours per week like other professionals.

Specialty nursing opportunities

Many RNs pursue additional education to become:

- Clinical nurse specialists, who perform advanced work in specialized fields such as cancer or mental health;
- Certified nurse midwives, who help women through pregnancy, through childbirth, and help care for their newborns;
- Nurse anesthetists, who anesthetize patients in the operating room, emergency room, and elsewhere;
- Nurse researchers, who study ways to improve nursing methods, evaluate patterns of patient care, and more;
- Nurse practitioners, who perform many advanced medical functions that once only physicians were permitted to do; and,
- Psychiatric nurse practitioners, who perform functions that once only psychiatrists were permitted to do.

Preparing for a nursing career

Nursing schools require a high school diploma and a sound academic standing in high school English, algebra, chemistry, biology, physics and psychology. An understanding of computers and technology also is a great asset.

Nurses also need:

- Leadership and organizational skills
- People skills
- Patience
- Flexibility
- Compassion
- Problem-solving skills
- A sense of humor
- The ability to stay calm in a crisis

Volunteering at a local hospital is a great way to learn more about the career and can help you get into the nursing school of your choice. Contact your local hospital about volunteer opportunities.

In addition to taking SATs and other tests, many nursing schools require a pre-admission test called the NLN Pre-Admission Exam. Your guidance counselor will have information about when and where this exam is offered.

Nursing School

Students interested in nursing should apply to state-approved and accredited schools of nursing.

Courses include classroom instruction in biology, chemistry, physics, the social sciences, nursing theory and practice, and the humanities. In addition, students get supervised clinical hands-on experience in hospitals and other health care settings.

Students need good study habits and excellent critical thinking and problem-solving skills. Confidence, determination, and an eagerness to learn will guide you in your pursuit to help and heal others as a nurse.

There are more than 1,500 nursing programs in the United States. Three types of training programs prepare you for different roles once you graduate:

- Bachelor of Science in Nursing (BSN) – a four-year program offered at colleges and universities around the country.
- Associate Degree in Nursing (ADN) – a two-year program offered at many community and junior colleges. Some hospital schools of nursing and universities offer ADN degrees.
- Hospital Diploma – a two- or three-year program based in hospital settings. Many diploma schools are affiliated with junior colleges where students take basic science and English requirements.

The BSN gives you the most opportunity for advancement and the most flexibility of the three types of degrees and is required for those interested in a master's degree in nursing.

A master's degree is required for those who want to practice in advanced specialty areas. Fields that require a master's degree include:

- Nurse practitioner
- Nurse anesthetist
- Nurse midwife
- Clinical nurse specialist
- RN first assistant in the operating room

Nurses interested in becoming a nurse researcher or a professor of nursing generally need to obtain doctoral degrees.

Clinical Laboratory Technician

If you are interested in a career that involves science and medicine, consider becoming a clinical laboratory technician. According to the best-selling 1999 book, *Jobs Rated Almanac: The Best and Worst Jobs* by Les Krantz, laboratory technicians are in the top 20 list of best jobs. Medical laboratory technicians, a specialty area of CLTs, ranked 18 in a list of 250 jobs. They also ranked fourth in the health care/medicine occupational category. The positions were scored on factors such as salary, stress levels, work environment, outlook, security and physical demands.

What it takes to be a CLT

All CLTs have certain common characteristics. They are problem solvers. They like challenge and responsibility. They are accurate, reliable, work well under pressure and are able to finish a task once started. They communicate well, both in writing and speaking. They set high standards for themselves and expect quality in the work they do. But, above all, they are deeply committed to their profession, and are truly fascinated by all that science has to offer. For someone who chooses a career as an CLT, the exploration never ends.

Specialty Opportunities for Laboratory Technicians

Technicians may specialize in the areas of chemistry, hematology, cytotechnology, immunology, virology, blood banking and microbiology. Medical technologists are specialists in major areas of the laboratory including blood banking, chemistry, hematology, immunology and microbiology.

Other specialty areas include:

- Medical Laboratory Technician (MLT)
- Medical Technologist (MT)
- Cytotechnologist (CT)
- Histotechnician or Histotechnologist (HTL)
- Phlebotomist
- Apheresis Technician (AT)

Medical Laboratory Technician (MLT)

MLTs perform blood tests, scanning for bacteria and viruses and examining diseases such as diabetes, and cancer. In addition to examining these diseases, MLT students learn how to correlate test results with a patient's condition. Medical and clinical laboratory technicians generally have either an associate's degree from a community or junior college or a certificate from a hospital, vocational or technical school, or from one of the U.S. Armed Forces. A few technicians learn their skills on the job.

Medical Technologists (MT)

A medical technologist (MT) supervises MLTs. They perform a variety of tests including simple pre-marital blood tests, to more complex tests to uncover diseases such as AIDS, diabetes and cancer. Responsible for confirming the accuracy of tests performed by MLTs, MTs report test results to a pathologist and other doctors. The information provided by MTs is critical because it determines a doctor's choice of treatment for the patient. Medical technologists have training beyond that of the medical laboratory technician, and may follow an educational program such as this:

- Graduation from high school, preferably with a background in science and math.
- Completion of a four-year university-based accredited medical technologist program.

Cytotechnologists (CT)

Using a microscope, cytotechnologists evaluate cells to determine whether they are cancerous, or infected then they provide an interpretation of their evaluation to a pathologist (a medical doctor who specializes in the study of diseases) for review. Cytotechnologists have a bachelor's degree and typically attend a 12-month training program. Entrance to cytotechnology schools requires college preparation including a minimum of 20 semester hours of biology and 8 semester hours of chemistry.

Histotechnician

Cancer can often be detected by the appearance of cells in a tissue sample. Once a sample tissue is taken from the patient, it's sent to the laboratory. It's the job of the histotechnician to prepare very thin sections of body tissues for microscopic examination by a pathologist. The histotechnician must work quickly and under pressure since the answers may be needed while the patient is in surgery. Working closely with the pathologist, the histotechnician freezes and cuts the tissues, mounts them on slides and stains them with special dyes to make the cell details visible under the microscope. With the information learned from the section of tissue biopsy, the pathologist and the surgeon find out if disease is present and if it has spread. They can then decide on the best course of treatment for the patient. The histotechnician works with delicate instruments and automated equipment as well as knives, chemicals and glass slides. He or she must value precision and have good hand-eye coordination and manual dexterity.

Phlebotomist Technician (PBT)

Phlebotomist Technicians (PBT) work directly with patients. PBTs collect blood samples from patients that will produce an accurate laboratory result. The PBT must establish trust with the patient while performing their duties skillfully, safely and reliably.

The primary duty of a phlebotomist is to draw blood specimens from patients for laboratory tests. The job includes establishing a professional relationship with the patient, selecting and preparing the puncture site of the skin, collecting specimens, preparing and maintaining equipment used for obtaining blood specimens and caring for the patient after specimen collection. Other duties include entering data into the computer for the testing process, as well as performing clerical duties associated with the record keeping of laboratory tests.

Apheresis Technician (AT)

Apheresis technicians are medical technicians who specialize in techniques that separate blood products (platelets, plasma and red blood cells) from a blood donation. After the required blood component is collected, the remaining components are returned to the donor. Apheresis techniques provide an advantage of obtaining the required amount of blood from two donors as opposed to ten donors.

What Clinical Laboratory Technicians Do

The clinical laboratory technician performs general tests in all laboratory areas:

- Blood banking – laboratory testing and treatment of blood to ensure that it is safe for transfusions.

- Chemistry – the science of the materials that make up our physical world
- Hematology – the study of disorders of the blood
- Immunology – the study of the ways in which the human body fights off invasions of bacteria, viruses, and other organisms.
- Microbiology – the study of microorganisms

CLTs work in hospitals, laboratories and other health care facilities. CLT's assist health care teams in identifying the absence, presence and degree of severity of a disease. This requires that their skills be accurate, that they be dedicated and skilled and that they pay attention to detail.

Typically, an CLT's duties will include preparing blood, urine and tissue specimens for analysis and monitoring tests and procedures. CLTs are trained to use high-tech laboratory equipment to look for bacteria, parasites, and other microorganisms; examine the chemical content of fluids; prepare blood for transfusions; and determine how a patient reacts to drug treatments by using various tests. Accuracy is of the utmost importance for CLTs.

Income Potential

According to the Bureau of Labor Statistics, the median annual earnings of medical and clinical laboratory technologists in all settings were $45,730 in 2004. The middle 50 percent earned between $38,740 and $54,310. The lowest 10 percent earned less than $32,240, and the highest 10 percent earned more than $63,120. Median annual earnings in hospitals employing medical and clinical laboratory technologists in 2004 were $46,020.

Median annual earnings of clinical laboratory technicians were $30,840 in 2004. The middle 50 percent earned between $24,890 and $37,770. The lowest 10 percent earned less than $20,410, and the highest 10 percent earned more than $45,680.

The Job Market

Employment opportunities for CLTs are numerous. The field has grown exponentially in the last few years and will continue to grow by as much as 10 to 20 percent through 2010. CLTs work in hospitals,

laboratories and other health care facilities and the demand will increase due to the growth of the population and an increase in the number of tests that have become available.

The future long-term employment for CLTs looks bright. Employment opportunities are expected to increase in the foreseeable future.

Technological advances will continue to spur the employment of CLTs through 2010. Although significant, the growth of the profession will not be the only source of opportunities. As in most occupations, many openings will result from the need to replace workers who transfer to other occupations, retire, or stop working for some other reason.

The information on the following pages was taken from the United States Department of Labor, Bureau of Labor Statistics, http://www.bls.gov/oco/ocos096.htm.

Median hourly wages for other CLT specialty areas by work location are as follows:

Specialty	Hospital	Private Clinic	Physician Office Lab
Cytotechnologist	$24.70	$24.07	$25.66
Histotechnologist	19.88	19.22	20.50
Medical technologist	20.40	19.00	18.00
Histotechnician	16.97	16.13	20.00
Medical laboratory technician	16.12	15.00	14.75
Phlebotomist	11.13	10.57	10.50

Career Preparation

To prepare for a career as an CLT, you should have a solid foundation in high school sciences—biology, chemistry, computer science and math. You'll need a combination of formal education plus clinical education in an CLT program accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Approximately 200 community colleges and hospitals offer these programs.

With a career as an CLT, you'll have unlimited choices. Unlike many other careers, your education in medical laboratory technology will prepare you directly for a job. While you're going to school, you can work part-time in a laboratory to earn extra money, and you could start working full-time the day after you graduate.

CLTs need to have:

- Aptitude for science course work
- Good eye/hand coordination and manual dexterity
- Good communication abilities
- Ability to work with precision and accuracy
- Ability to problem solve
- Ability to work well under pressure
- Ability to work as a team player

Certification

To be sure that laboratory workers are competent and able to perform high quality laboratory tests, the Board of Registry of the American Society for Clinical Pathology gives a national certification exam. Students take this exam after meeting their academic and laboratory education requirements. Those who pass the exam for CLTs may use the initials, CLT (ASCP), after their name to show they are proficient in their field.

Pharmacy Careers

The following information was taken from the websites of the American Association of Colleges of Pharmacy, American Society of Health System Pharmacists, and the Department of Labor, Bureau of Labor Statistics, Pharmacy Careers.

Most people think of pharmacists when they get sick and they need to fill a prescription at their community pharmacy or to have drug-related questions answered. But that is just a small part of an extensive list of things that pharmacists are qualified to do. Besides working in the community, a pharmacist can work in a hospital, home health care, nursing homes, organizations, pharmaceutical research companies, government health agencies, and higher education among others.

Although pharmacists do not have the most visible job in health care they are a critical element to the delivery of quality patient care. The pharmacy profession, like all other health care professions, is in the midst of a severe shortage, which has left the profession overtapped.

There are career opportunities for pharmacists in hospitals, long-term care facilities, home health centers, and clinics. Some 50,000 chain and independent pharmacy retailers, department stores, and supermarkets across the United States operate pharmacy operations where qualified pharmacy professionals are working.

Pharmacy—A Prescription for a Rewarding Career

Why Pharmacy?

- A well-rounded career. Pharmacy is an exciting blend of science, health care, direct patient contact, computer technology, and business.
- A vital part of the health care system. Pharmacists play a vital role in improving patient care through the medicine and information they provide.
- Excellent earning potential. Pharmacy is one of the most financially rewarding careers.
- Outstanding opportunities. There is an unprecedented demand for pharmacists in a wide variety of occupational settings.
- A trusted profession. Pharmacists are consistently ranked as one of the most highly trusted professionals because of the care and service they provide. (According to data by Gallup International)

Did You Know?

- Pharmacy is the third largest health profession in the US?
- Pharmacists play a vital role in improving patient care through the medicine and information they provide?
- Pharmacists are consistently ranked as one of the most highly trusted professionals because of the care and service they provide?
- There is an unprecedented demand for pharmacists?

What do hospital pharmacists do?

Hospital pharmacists advise other health professionals about the actions, interactions, and side effects of drugs, and counsel patients about medications. They may help select the medications the hospital will use, manufacture preparations, dispense prescription drugs, and handle special products like radioactive medicines, artificial kidney fluid, and plastic inserts. Many hospital-based pharmacists also are administrators and influential members of important committees.

Clinical pharmacists promote appropriate, effective and safe medication use for patients within the hospital. By working as part of a health care team, they are able to closely monitor patient drug therapy and make recommendations on the selection of the best medication for a patient's condition, the correct dose and duration of therapy. Clinical pharmacists can specifically tailor the medication choice or dose-form to be most appropriate for the patient."

Pharmacists are available to advise doctors, nurses and other hospital staff on any medication issues.

They provide advice on the effects, administration, availability, cost and Pharmaceutical Benefits Scheme (PBS) status of drugs. Valuable information resources are available in the department and may be accessed by all hospital staff.

By working closely with nursing staff, pharmacists can make it easier for patients to take medicine or make complicated administration regimens less complex. Pharmacists regularly present education sessions to nursing staff on a wide range of topics.

While responsibilities vary among the different areas of pharmacy practice, the bottom line is that pharmacists help patients get well. Pharmacist responsibilities include a range of care for patients, from dispensing medications to monitoring patient health and progress to maximize their response to the medication. Pharmacists also educate consumers and patients on the use of prescriptions and over-the-counter medications, and advise physicians, nurses, and other health care professionals on drug decisions.

Pharmacists also provide expertise about the composition of drugs, including their chemical, biological, and physical properties and their manufacture and use. Pharmacists ensure drug purity and strength and make sure that drugs do not interact in a harmful way. They are the drug experts ultimately concerned about their patients' health and wellness.

In addition, pharmacists:

- Advise doctors on the choice and dose of medication, ensuring that the least number of medications necessary for treatment are used
- Monitor and report side effects caused by medications
- Anticipate problems that may occur when two or more medications are used together,
- Advise nurses on how to give medications. Some medications don't taste the best. We can suggest options to improve their acceptance.
- Dispense medications for both inpatients and outpatients.
- Provide up-to-date information about medications to doctors, nurses, other hospital staff. We answer drug-related questions, write guidelines, prepare bulletins, etc.
- Prepare sterile medications under special conditions (e.g. intravenous medications, anticancer medications, eye drops).
- Coordinate, prepare and monitor intravenous feed formula (parenteral nutrition) for those patients unable to take food otherwise.
- Manufacture other special products, e.g. creams, mixtures, suppositories.
- Advise on the selection of new medications for the hospital.
- Help design and run trials to evaluate new medications.

Nursing Home and Extended Care Facility Pharmacy

Pharmacists who work in nursing homes and extended care facilities provide prescription service for patients, and they consult with other health professionals who care for the patients. As consultants they review patient charts for correct dosages, drug interactions, adverse reactions, or side effects. They may counsel patients about their medications.

Community Pharmacy

Community pharmacists are charged with the safe and efficient distribution of prescription medications, advising patients on the proper use of their prescription and non-prescription medication

use and keeping the records of patients and their health, illnesses, and medications. These pharmacists are the most visible branch of practice and there are approximately 50,000 community pharmacists in the United States.

Community pharmacists also provide information and advice about medications to physicians and other health professionals. In addition, community pharmacists increasingly provide pharmacy services and supplies to the growing number of patients who receive health care at home, and they are actively involved in community service.

Industrial Pharmacy

Pharmacists in pharmaceutical manufacturing may work in research, and development, testing of medications in humans, production systems, quality control, government regulations, marketing, public relations, sales, and management. Pharmacists who work in the pharmaceutical industry often need an additional postgraduate degree, such as a master's or a Ph.D. degree.

Academic Pharmacy

Perhaps no other job in pharmacy has such far-reaching effects on the profession as that of an educator. It is in academia that one can excite individuals about pharmacy and lay the groundwork for continuing advances in the field. Over 3,000 full-time faculty members work in the nation's colleges and schools of pharmacy. They are involved with teaching, research, public service, and patient care. Others serve as consultants for local, state, national, and international organizations. Becoming a member of the faculty at a college of pharmacy usually requires a postgraduate degree and/or training (e.g., Ph.D. degree or residency or fellowship training following the professional degree program). There currently exists a shortage of pharmacy faculty, creating an array of excellent professional opportunities.

Advanced Pharmacy Careers

Doctor of Pharmacy or Pharm.D. graduates can work as drug information specialists in a hospital or other health care organizations. They also can work for the Food and Drug Administration, the Drug Enforcement Administration, the Veterans Administration, the Public Health Service, the Armed Forces, the National Institutes of Health, and many other government agencies. Pharm.D. graduates find ample practice opportunities in managed care organizations, home health care agencies and general and specialized clinics.

Pharmacists, in and out of the community pharmacy, are specialists in the science and clinical use of medications. They are knowledgeable about the composition of drugs, their chemical and physical properties, and their manufacture and uses, as well as how products are tested for purity and strength. Additionally, a pharmacist needs to understand the activity of a drug and how it will work within the body. More and more prescribers rely on pharmacists for information about various drugs, their availability, and their activity, just as patrons do when they ask about nonprescription medications.

The principal goal of pharmaceutical care is to achieve positive outcomes from the use of medication which improves patients' quality of life. These outcomes include:

- cure of a disease;
- elimination or reduction of symptoms;
- arresting or slowing a disease process;
- prevention of disease;
- diagnosis of disease; and
- desired alterations in physiological processes, all with minimum risk to patients.

The Job Market and Salary

According to the Bureau of Labor Statistics, the median annual wage and salary earnings of pharmacists were $84,900 in 2004. The middle 50 percent earned between $75,720 and $94,850. The lowest 10 percent earned less than $61,200, and the highest 10 percent earned more than $109,850. Pharmacists in general medical and surgical hospitals earned $84,560 in 2004.

Pharmacy technicians earned an average of $11.37 an hour in 2004. Median earnings per hour for pharmacy technicians in medical and surgical hospitals were $12.93. Certified technicians may earn more, and shift differentials for working evenings or weekends can also increase earnings.

Becoming a Pharmacist

Here are some things to think about when considering a career in pharmacy. Typically, one should consider both the steps involved in the process of becoming a pharmacist as well as the career options available to pharmacists. Even more importantly, you must consider the responsibilities and qualifications of a pharmacist relative to your own abilities.

An excellent source of information which may help you investigate these considerations is a booklet entitled "Shall I study Pharmacy?" published by the American Association of the Colleges of Pharmacy (AACP). This booklet is available from the AACP web site in PDF format.

When Looking for a College, Start by Looking at Yourself : Successful College Searches Begin With Knowing Who You Are (from Peterson's Guides online)

Your Future in Pharmacy Begins with Education

A balanced and comprehensive high school and college education is an important first step in the pursuit of a professional degree in pharmacy, especially in the areas of math and science. The Doctor of Pharmacy (Pharm.D.) degree program requires at least two years of pre-professional (undergraduate) study followed by four academic years of professional study. The majority of first-year students enter a pharmacy program with three or four years of college experience. The requirements for admission into a pharmacy program vary.

Don't delay find out more today!

Visit the American Association of Colleges of Pharmacy web site for more information about career opportunities and links to all U.S. colleges and schools of pharmacy. http://www.aacp.org

High School Preparation for a Career in Pharmacy

A solid education in high school science and math classes is essential for studying pharmacy. Science classes are good preparation for or the advanced science courses required in the Doctor of Pharmacy (Pharm.D.) degree curriculum. Courses in biology, chemistry, physics, and mathematics are especially desirable.

High school students considering a career in pharmacy should also have good written and verbal communication skills. Prospective pharmacy students are encouraged to take college preparatory classes in areas such as literature, history, government, and humanities in order to become well-rounded individuals. These skills will help create an educational foundation on which to grow. Contrary to popular belief, Latin, while helpful in many aspects, is not essential for admission to pharmacy school.

Colleges and schools of pharmacy, in considering applicants for admission, may give attention to the relative position of students within their class—near the top, in the middle group, or near the bottom. Although colleges of pharmacy are interested in enrolling students who have demonstrated exceptional work in school, they are also interested in students who demonstrate potential for contributing to the profession.

The classes required for admission into a pharmacy program vary significantly from one institution to the next. Due to the variations in admission requirements and procedures among the colleges and schools of pharmacy, it is advisable for high school students to research different pharmacy programs. In some cases, high school counselors or college advisors may have the necessary information. The pharmacy programs will be pleased to supply details concerning admission or curriculum. School specific information is also available in the AACP publication, "Pharmacy School Admission Requirements" (PSAR). The on-line version of the PSAR is available for free on the AACP web site.

In addition to academic preparation, high school students should evaluate their personal qualifications to meet pharmacy's demands for judgment, dependability, and conscientious performance. Pharmacists must be able to pay attention to detail. As with others on the health care team, the pharmacist's decisions and actions effect human life and well-being. Pharmacists, by law, are entrusted with the proper handling and dispensing of potentially dangerous and habit-forming substances. They must have high ethical standards, communicate well with patients and other health care providers, maintain reliable records, and be knowledgeable about existing and new medications on the market to ensure each patient has optimal drug therapy results.

College Preparation for a Career in Pharmacy

The Pharm.D. degree program requires at least 2-years of specific pre-professional (undergraduate) coursework followed by 4-academic years (or 3-calendar years) of professional study. Pharmacy colleges and schools may accept students directly from high school for both the pre-pharmacy and pharmacy curriculum, or after completion of the college course prerequisites. The majority of students enter a pharmacy program with 3 or more years of college experience. College graduates who enroll in a pharmacy program must complete the full 4-academic years (or 3- calendar) years of professional study to earn the Pharm.D. degree. The AACP does not track the availability of accelerated programs of study for individuals with a baccalaureate degree in a related health career or science field.

You are not required to major in "pre-pharmacy" to be eligible for admission to pharmacy school. Chemistry is the most common major for pharmacy applicants because the course prerequisites for pharmacy are incorporated into the standard chemistry curriculum. Pharmacy students, however; come from a wide variety of educational backgrounds, including those who majored in English, business, communications, biology, etc. If the pharmacy prerequisite courses are not required as part of your undergraduate major, you will need to complete these courses as electives. Contact pharmacy programs directly to determine whether classes the admissions office distinguishes between classes taken at a community college versus a four-year university or college.

Approximately half of all pharmacy programs require applicants to submit scores from a standardized test known as the Pharmacy College Admission Test (PCAT). To determine which colleges and schools require the PCAT, review Table 9 of the PSAR handbook.

Source: Maryland Health Careers
www.marylandhealthcareers.org

Other helpful websites:
www.nurse.com
www.mayo.edu/mshs/lab-career.html
www.nacds.org

The fall issue of *The Forum* will be available at:

www.VaWorkConnect.com

on Friday, September 11, 2009

If you would like to receive an email notification when the next issue is available, please send your request to:

Linda Simmons—linda.simmons@vec.virginia.gov

Product Order Form

These products are available at no charge, except where noted.

Item	Description	Quantity
Bookmarks	The high school graduate vs. the high school dropout	
Job Interview Pocket Résumé	Small tri-fold reference résumé that fits in a wallet or pocket	
Virginia's Mid-Atlantic Guide to Information on Careers (MAGIC)	Contains information on education, job training, job-seeking, and careers—Minimal fee charged for orders outside of Virginia—also available on the VEC website*	
Virginia Business Resource Directory	How to start your own business—also available on the VEC website*	Hard copy
		CD-ROM
Virginia Job Outlook	Brochure with top occupations, growth rate, and annual average salaries by educational attainment—also available on the VEC website*	
Display Posters	Qualities Needed for Success in the Workplace—24"x18"	
	Visualize - Starting Your Own Business—24"x18"	
	Interview Tips—18"x 24"	
One-Page Information Sheets—camera-ready versions to print multiple copies	Eight Keys to Employability	
	Tomorrows Jobs	
	Sample Application Form	
	Ten Most-Wanted Skills	
	Education Pays...	
Available only on the VEC website*		
Virginia Labor Market Information Directory	Listing and description of VEC publications, products, special services, and data delivery systems—reference material only	
Industry and Occupational Employment Projections: 2006-2016	• Virginia • Workforce Investment Areas (WIAs) • United States	
Occupational Wage Data Report: 2007	Reference material only for: • United States • Statewide, Virginia • Workforce Investment Areas (WIAs) • Virginia Metropolitan Wage Data (MSAs) • Occupational Employment Statistical Regions Planning Districts • Planning District Commissions (PDCs)	

*VaEmploy.Com

To order materials, please indicate the number of items requested in the space to the right of the product name and mail or fax to:

Virginia Employment Commission
LMDA, Room 324
P.O. Box 1358
Richmond, VA 23218-1358
Telephone (804) 786-5880
Fax (804) 786-7844

For large orders, please make sure that the address you list is for a physical location (not a P.O. box) and that you include the name of a contact person.

Please feel free to make copies of this order form.

Name:		
Organization:		
Address:		
City:	State:	Zip:
Telephone ( )		
E-mail Address:		
Is this order for a scheduled event?		Yes
		If yes, date needed by: *(Please allow 5-7 business days for delivery)*
		No

Shipping Charge (VEC Staff Only) _____ Cost Center _____ Project Code _____ Function Code